	Application No.	Applicant(s)
Notice of Allowability	09/898,364	SCHOFIELD, ANDREW JOHN
	Examiner	Art Unit
	JEAN B. FLEURANTIN	2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *16 August 2004*.

2. ☒ The allowed claim(s) is/are *1,3,4 and 6-8*.

3. ☒ The drawings filed on *03 July 2001 and 06 April 2004* are accepted by the Examiner.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
           International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

     (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

     (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

SHAHID ALAM
PRIMARY EXAMINER

DETAILED ACTION

Response to Arguments

I.   Applicant's arguments, see Paper Number 08/16/2004, in which claims 1, 3, 4

and 6-8 remain pending for examination.

EXAMINER'S AMENDMENT

II.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Glanzman, Gerald Howard on 29 September 2004.

The application has been amended as follows:

Please cancel claims 2 and 5.

Please replace claims 1, 3, 4, 7 and 8 with clean version claims 1, 3, 4, 7 and 8.

1.   A method for logging updates to a plurality of data records into discrete pages in

non-volatile storage, wherein a page partially full of data is known as a partial page, said

method comprising the steps of:

establishing identical partial pages I and I+1 at the earliest opportunity,

in response to a data segment D larger than the remaining space of a most

recent updated partial page I, partitioning D into a first segment D1 sufficient to fill the

remaining space of page I and a second data segment D2,

filing page I with a first write operation of its present contents concatenated with

D1, and

creating identical partial pages I+1 and I+2 with a single, second write operation

of D2 to both pages, whereby pages I+1 and I+2 become the new pages I and I+1 for

the next logging operation,

wherein in response to successive data segments D, the first of which is smaller

than the remaining space of the most recently updated partial page I, writing page I+1 to

the presentcontents of page I concatenated with D, and thereafter alternating this

procedure between pages I and I+1 until a data segment X fills the remaining space of

the page containing the most recent update, and at that point writing page I to the value

of the most recent update concatenated with the new segment X in a first write

operation and writing any remaining part of segment X into both pages I+1 and I+2 in a

second write operation.

3.   The method of claim 1 comprising the step of:

in response to successive data segments D, the first of which is smaller than the

remaining space of the most recently updated partial page I, writing 1+1 to the present

contents of page I concatenated with D, and thereafter continuing this procedure into

successive pages I+2 , I+3, etc. until a data segment X fills the remaining space of the

page containing the most recent update, and at that point writing page I to the value of

the most recent update concatenated with the new segment X in a first write operation

and writing any remaining part of segment X into both pages 1+1 and 1+2 in a second

write operation.

4.   Apparatus for logging updates to a plurality of data records into discrete pages in

non-volatile storage, wherein a page partially full of data is known as a partial page,

comprising:

        means for establishing identical partial pages I and I+1 at the earliest opportunity;

        means responsive to a data segment D larger than the remaining space of a

most recent updated partial page I for partitioning D into a first segment D1 sufficient to

fill the remaining space of page I and a second data segment D2,

        means for filling page I with a first write operation to its present contents

concatenated with D1, and

        means for updating with a second write operation both pages I+1 and I+2 to D2,

whereby pages I+1 and I+2 become the new pages I and I+1 for the next logging

operation,

        wherein means responsive to successive data segments D, the first of which is

smaller than the remaining space of the most recently updated partial page I for writing

page I+1 to the present contents of page I concatenated with D, and means for

thereafter alternating this procedure between pages 1 and I+1 until a data segment X

fills the remaining space of the page containing the most recent update, and means for

writing page I to the contents of the page containing the most recent updated

concatenated with the last received data segment X.

6.   The apparatus of claim 4 further comprising:

means responsive to successive data segments D, the first of which is smaller

than the remaining space of the most recently updated partial page I for writing page I+1

to the presentcontents of page I concatenated with D, and means for thereafter

continuing this procedure into successive pages I+2, I+3, etc. until a data segment X

fills the remaining space of the page containing the most recent update, and means for

writing page I to the contents of the page containing the most recent update

concatenated with the last received data segment X.

7.   A storage medium for storing computer program instructions that when loaded

into a computer performs the steps of claim 1.

8.   A carrier wave containing computer program instructions that when loaded into a

computer performs the steps of claim 1.

Allowable Subject Matter

III.   Claims 1, 3, 4 and 6-8 are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

With respect to claim 1, the claimed features "a method for logging updates to a plurality of data records into discrete pages in non-volatile storage, wherein a page partially full of data is known as a partial page, said method comprising the steps of: wherein in response to successive data segments D, the first of which is smaller than the remaining space of the most recently updated partial page I, writing page I+1 to the present contents of page I concatenated with D, and thereafter alternating this procedure between pages I and I+1 until a data segment X fills the remaining space of the page containing the most recent update, and at that point writing page I to the value of the most recent update concatenated with the new segment X in a first write operation and writing any remaining part of segment X into both pages I+1 and I+2 in a second write operation" in combination with other element of the independent claims would not found anticipated or obvious over the prior art made of record. With respect to claim 4, the claimed features "apparatus for logging updates to a plurality of data records into discrete pages in non-volatile storage, wherein a page partially full of data is known as a partial page, comprising: wherein means responsive to successive data segments D, the first of which is smaller than the remaining space of the most recently updated partial page I for writing page I+1 to the present contents of page I concatenated with D, and means for thereafter alternating this procedure between

pages 1 and I+1 until a data segment X fills the remaining space of the page containing

the most recent update, and means for writing page I to the contents of the page

containing the most recent updated concatenated with the last received data segment

X" in combination with other element of the independent claims would not found

anticipated or obvious over the prior art made of record.

The dependent claims, being definite, further limiting, and fully enabled by the

specification are also allowed.

The closest prior art, Mohan U.S. Patent No. 5,418,940 relates to transaction

management systems but fails to teach the above limitations.

Any comments considered necessary by applicant must be submitted no later

than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on

Statement of Reasons for Allowance."

CONTACT INFORMATION

IV.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 703

- 308-6718. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, JOHN E BREENE can be reached on 703 - 305-9790. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin

September 29, 2004

SHAHID ALAM
PRIMARY EXAMINER